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ADDENDUM

To the "Essay on the Relation of Bilious and Yellow Fever."

By Richard D. Arnold, M.D., Professor of the Theory and

Practice of Medicine in the Savannah Medical College.

Since the reading of my essay, several circumstances have occurred to me which I consider as bearing directly and practical-

ly on the subject treated therein.

The beginning of each summer, since our epidemic of 1854, has been a time of anxiety for many citizens, and the physician was often catechised as to his opinion, whether or not, Yellow fever was likely to appear. Being no prophet, I could not answer such queries; but, I always said, that if we had such an awfully hot summer as that of 1854, I should look out for an epidemic. The difference of mean temperature does not give any correct idea of the relative heat of two summers. According to the registry published in our newspapers in 1855, the mean temperature of July, 1854, was but one degree above that of July, 1855. When I state that the register was kept by my scientific friend, Dr. J. F. Posey, its correctness will not be doubted. Now, the contrast as to feeling was immense. July, 1855, was a remarkably pleasant month: July, 1854, will live in the memories of those who sweltered under it in this city, as by far the hottest and most oppressive month ever experienced by the "oldest inhabitant."

Measles prevailed epidemically, and with unusual severity during the latter part of January, and during February, March and

April.

In May, there was very little sickness of any kind. It is very rare ever to see a periodical fever of any type in that month. I

was called on the 21st May to see a boy, a native, aged about seven years. I found him with a diarrhoea, and a good deal of general fever: I treated him accordingly. The fever abated notably towards evening, and the next morning it as notably exacerbated, again remitting at night to a perfect apprexia. As there was thus evident periodicity, I determined to use quinine, which I did.

On the morning of the 23rd, the apyrexia continuing, there being no pain of any kind, no nausea, a pulse down to 80, the skin of a temperature to entitle it to be considered normal, quinine was again given and kept up all day and in the evening, I quitted my patient for the night without the slightest anxiety. At sunrise, I was aroused by a hasty summons, and I found things very much changed with my little patient. The face was pinched, the nostrils dilated, the eyes sunk, the complexion pallid, the expression of the face anxious and haggard, the pulse small, weak and compressible.

A dark stain on the sheet attracted my attention. I was told that at about two o'clock, he began to be nauseated, and shortly after, threw up the black stuff which stained the sheet. The vomiting had continued until my visit. While examining him he threw some of it up, with the spasmodic jerk so often noticed, and it was literally squirted over my clothes. This continued all day, until death closed the scene on the same evening.

He was a very delicate child. What was his disease? I answer unhesitatingly, a case of sporadic Yellow fever. The apyrexia was the deceitful calm so often met with in that type of fever. About the black vomit, there could be no doubt. It was at once recognized by those about the child, for they had seen such too frequently in 1854.

As I will not indulge in speculation, but deal only with facts, let us pass on through the summer. June was remarkably pleasant and remarkably healthy. On the 3d of July, I was called to a case in consultation with my friend, Dr. Wragg. He informed me that the patient had thrown up black vomit, in which I agreed with him after I had examined the ejecta. The skin was discolored of a universal yellow. Death soon let down the curtain of existence.

Here, again, was an undoubted case of sporadic Yellow fever. A singular fact is connected with the last case, a gentleman of about thirty-five years of age. He had passed untouched, through the epidemic of 1854, from beginning to end, and was a most active and untiring member of the Young Men's Benevolent Association; for often and often had I met him during that fearful season.

In neither case could an autopsy be obtained.

Up to the very end of September, I never experienced a healthier summer in twenty-six years' practice. After a cold period of weather at that time, there was a warm period. The cold had not produced any frost. I ascertained from various authentic sources that the sweet potato vines were not even wilted. During October, there was a good deal of malarial fever, and of a congestive type.

While attending a case of hydrocephalus, in consultation with my colleague, Dr. J. B. Read, he informed me that he had a case of fever which looked very suspicious, as his eyes were bloodshot, his pulse was sixty, and there was glairy vomiting, and he feared

black vomit would follow.

On Thursday, the 23rd, he did throw it up. On Sunday, the 26th, I saw the patient and the black vomit. Every symptom announced genuine Yellow fever. Here was another sporadic case of Yellew fever. An important question to determine, in case of death, was, will it present the same pathological appearances as a case of epidemic Yellow fever?

With but faint hopes of recovery we gave him very large doses

of acetate of lead, and champagne frappee, freely.

He died on the night of the 28th. Dr. Read fortunately succeeded in obtaining permission for an autopsy, which was made the next morning by Dr. Read, and by my pupil, Mr. Theodore McFarland, who was in the Savannah epidemic of 1854, and then conducted my autopsies, and was one of the Savannah volunteers who went to Norfolk in 1855, assisted by my other pupils, Messrs. Joseph M. Turner and Franklin Jones.

The notes were taken by me on the spot, and sanctioned by Dr. Read, who, in addition to his experience here in 1854, was sent

on by the City of Savannah to Norfolk, in 1855.

Autopsy fourteen hours after death. Body fat, of a bright yellow color.

Liver, enlarged, filled with bloody serosity, presenting the peculiar box-wood color, described before as the characteristic color of Yellow fever livers as presented in this locality, during a period of time now covering twenty-nine years.

The acini were not distinct, the liver when cut, was smooth and compact. The liver was much enlarged. The pancreas was also very much enlarged, and had tubercular deposites in the circumjacent glands, and *under* the peritoneal coat.

Spleen was enlarged, of a lively purple color.

Stomach was intensely and uniformly injected, of a dark red. The veins of the stomach were very much congested, showing themselves by a black streak, as well as by their distension. The blood in them was black and fluid. The mucous membrane at the cardiac extremity tore off in flakes a quarter of an inch long; in the larger curvature the flakes were half an inch long.

The mucous membrane was mammellonated over most of its surface. Black specks could be seen scattered about all the surface. Lungs healthy.

Heart softened, the finger passing easily through the walls of the right auricle.

There was a very large deposit of fat in the omentum. Several of the glands near the pancreas were enlarged, and contained a black fibrinous deposit resembling the softening coagulum of an aneurism.

The gall-bladder contained a small quantity of thin dark bile. Not a trace of bile could be found in the intestinal tube, from the cardiac orifice to the anus.

The kidneys were natural. There had been the usual suppression of urinary secretion.

The head was not examined, because it was not affected until shortly before the termination of the case.

Dr. Read saw autopsies of Yellow fever in 1852, in 1854, and in Norfolk in 1855; Mr. McFarland, in 1854, here, and in Norfolk in 1855. They all agreed as to the perfect similarity of all the Yellow fever livers they had ever seen.

I consider it useless to spin out any further proof. The color compared well and accurately with the lithograph of the Yellow fever liver executed for me, by Thomas Sinclair & Co., of Philadelphia, which, with the two others of the bronzed liver, and the varieties of colors of Bilious fever liver, executed by the same artists, from drawings from nature in my possession, will be sent to the various members of the profession to whom these articles will be sent in a pamphlet form,

Let us hasten on and ascertain if any of the peculiar colors of the Bilious fever liver can be found at the present day.

A British seaman, in the Marine Hospital, came under my care in my clinic at the hospital, on the 15th of November. He had been aboard of his ship for five weeks. Now frost did not occur until the first week of November, and consequently he had been exposed to the exhalations of the concentrated poison of malaria late in the fall.

Without going into detail, suffice it to say, the case was marked by distinct periodicity, by the pallid anæmic hue so peculiar to malarial fevers, and many cases of which I have pointed out this season to my class, in cases of prolonged malarial intermittent.

There was always a torpor about him, and two days before he died, he sank into a profound stupor. He died on the 22nd, at ten o'clock, P. M., and was examined thirteen hours afterwards.

Body, considerably reduced. Sallow, pallid, anæmic hue.

Head. Very little blood in sinuses or veins, a good deal of serum escaped while taking out the brain.

The arachnoid was distinctly pearl-colored and opaque where it passes over the interstices between the convolutions of the brain; also, where it passes from the nates and testes to the medulla oblongata. I cannot say the effusion was as great as I have often seen. The substance of the brain was anæmic. There were a great many air-bubbles under the arachnoid.

Spleen, usual color, perhaps a little enlarged.

Kidneys, much larger than natural, nothing peculiar inside.

Liver, externally, of a bluish slate color.

Gall-bladder, distended with bile. Liver undoubtedly enlarged about a third above its ordinary size; when cut into, of a uniform bronze color, easily broken, friable, breaking into small pieces, a good deal of serum in it.

Stomach. Mucous membrane injected, arborescent towards cardiac extremity. Towards the greater curvature, it was of an olive color, with, occasionally, spots of a blackish brown.

The mucous membrane was thickened and corrugated, a piece of white paper rubbed on its coat, received a yellow tinge of bile. A piece rubbed on the cut surfaces of the acini of the liver, also received a decidedly yellow tinge. The lower part of the ileum

was cut open; -it was perfectly sound and contained yellow bilious matter.

The foregoing facts prove conclusively, that sporadic cases of Yellow fever do occur, having all the symptoms of those during an epidemic, and the same pathological appearances after death.



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